

Dairy Herd Improvement Letter

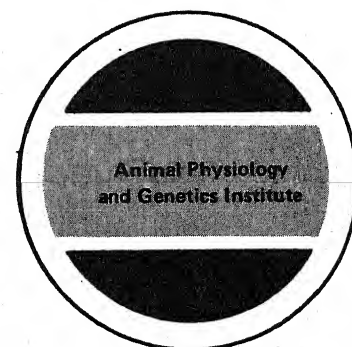
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ARS-NE-60-5

NATIONAL COOPERATIVE
DAIRY HERD IMPROVEMENT
PROGRAM

A dairy recordkeeping plan
for every herd

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Dairy Herd Improvement Letter

NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM PARTICIPATION REPORT, JANUARY 1, 1976 1/

The National Cooperative Dairy Herd Improvement Program (NCDHIP) is a composite of the Official Dairy Herd Improvement (Official DHI), Dairy Herd Improvement Registry (DHIR), Owner-Sampler, Alternate AM-PM, Commercial, Weigh-a-Day-a-Month (WADAM), and other unofficial diary recordkeeping plans.

On January 1, 1976, the program included 53,114 herds with 3,482,643 cows, or 31.4 percent of the Nation's dairy cow population. The cows were in 1,051 associations with 2,218 supervisors. Official DHI and DHIR included 32,232 herds and 2,438,365 cows, averaging 75.7 cows per herd. DHIR alone included 3,198 herds and 240,603 cows, averaging 75.2 cows per herd. Owner-Sampler included 17,299 herds and 726,610 cows, averaging 42.0 cows per herd. Similar figures for Alternate AM-PM were 2,355 herds, 123,590 cows, and 52.5 cows per herd. All other unofficial plans included 1,228 herds and 194,078 cows, averaging 158.0 cows per herd.

The percentage of the Nation's cows enrolled in Official DHI and DHIR was 22.0, which is up from 21.7 percent in 1975. DHIR alone enrolled 2.2 percent of the Nation's cows. Owner-Sampler cows were 6.6 percent of the Nation's cows in 1975, and Alternate AM-PM increased slightly to 1.1 percent. Enrollment in other unofficial plans comprised 1.8 percent of the Nation's cows, an increase of 0.2 percent from 1975.

Table 1 lists those States that have State Dairy Herd Improvement Associations and those that hold membership in the National Dairy Herd Improvement Association, Inc. (NDHIA). (See map on page 3.) The numbers of associations and supervisors in the Program are also listed. The count of counties was dropped because the association is now the more meaningful organization to consider.

In 1975 three State DHIA's (Idaho, Nevada, and North Dakota) were formed for a total of 47 as of January 1, 1976. Since January 1, 1975, four States (Nevada, North Dakota, Rhode Island, and Wyoming) joined NDHIA for a total of 44 States and Puerto Rico as of January 1, 1976. The continuing formation of State DHIA's and the rapid growth of NDHIA are encouraging.

Table 2 lists the percentages of all milk cows included in all record-keeping plans. (See map on page 4.) The data show four States (Hawaii, South Carolina, Nevada, and California) with more than 50 percent of their cows tested. Ten States follow with between 40 and 49.9 percent of their cows

1/ Prepared by Gerald J. King, dairy husbandman, and Evelyn F. Myers, clerk, in the Animal Improvement Programs Laboratory, Animal Physiology and Genetics Institute, Northeastern Region, ARS, USDA, Beltsville, Md. 20705, from data supplied by the State Extension Dairyemen reporting on the NCDHIP.

tested; 16 States, between 30 and 39.9 percent; 10 States, between 20 and 29.9 percent; 9 States, between 10 and 19.9 percent; and 1 State still has less than 10 percent of its cows tested.

Table 3 summarizes the data for participating States in each record-keeping plan. Footnote 4 lists 946 herds and 37,811 cows on unofficial recordkeeping plans not under the auspices of the NCDHIP. Two of these plans are vocational agriculture and private testing.

Tables 4 through 8 present details of participation in the various plans. Table 4 shows there are 10 more herds and 6,000 more cows on official test on January 1, 1976, than on January 1, 1975. Average herd size increased by 0.3 cow.

Table 5 presents data for the DHIR plan. The DHIR plan increased in herds and cows since January 1, 1975.

Table 6 presents data for the Owner-Sampler plan. The Owner-Sampler plan decreased in herds and cows since January 1, 1975.

Table 7 presents data for the Alternate AM-PM, Commercial, and WADAM plans. Alternate AM-PM testing increased by almost 50 percent in cow numbers by January 1, 1976.

Table 8 presents data for the Milk-Only-Record plan and all other unofficial plans.

Table 9 presents a history of Official DHI and DHIR testing in the United States since 1940. The given number of associations and supervisors is for the total NCDHIP. Data for 1906 through 1939 are included in table 10 of the May 1970 Dairy Herd Improvement Letter, ARS 44-215.

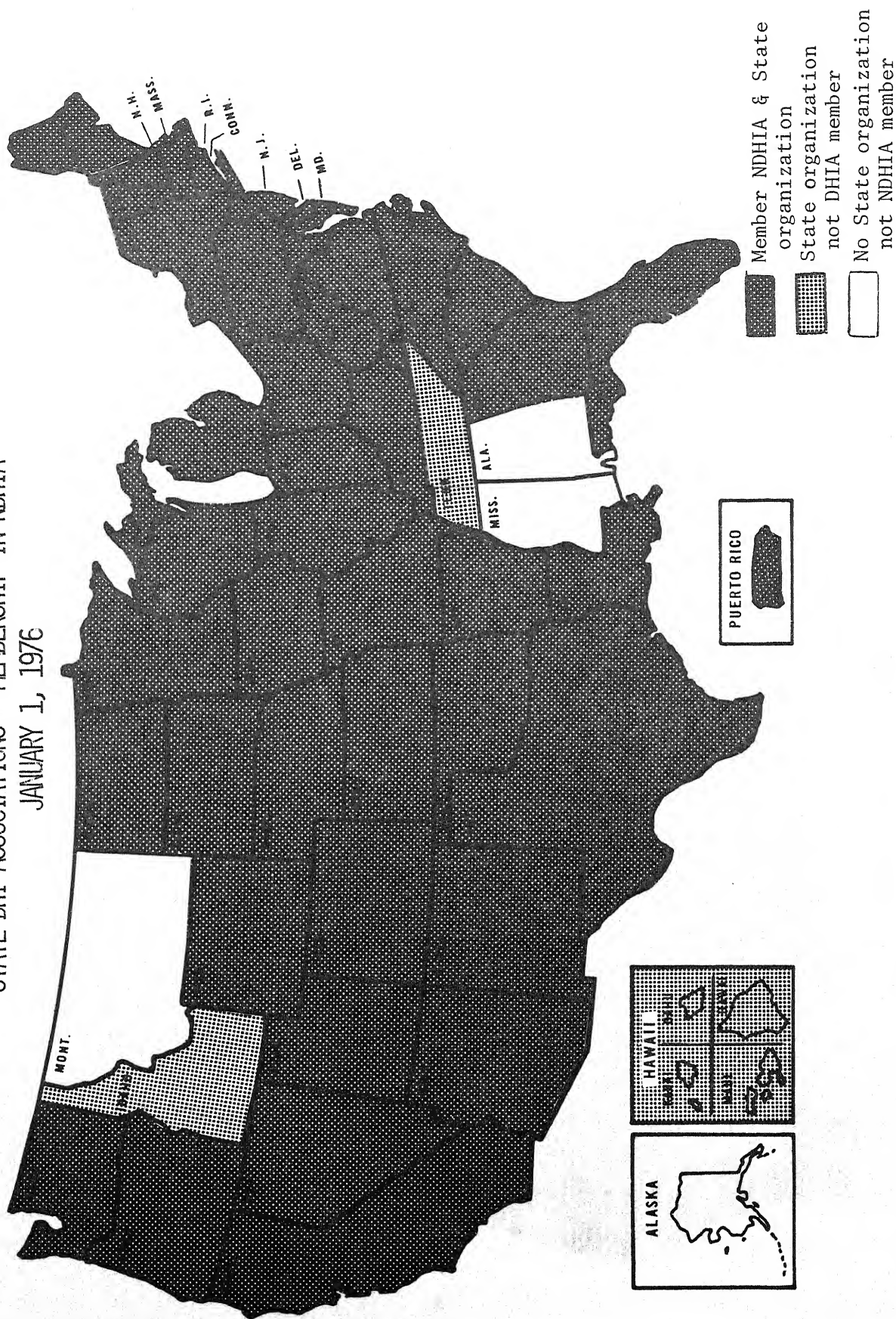
Table 10 presents a history of the Owner-Sampler plan from its first tabulation for January 1, 1956.

Table 11 presents a history of other unofficial plans since January 1, 1957, just after the beginning of WADAM testing.

Table 12 lists counties or associations that have 40 percent or more of their dairy cows included in the NCDHIP.

Table 13 is a list of the Extension Dairywomen who advise on the NCDHIP in the States.

STATE DHI ASSOCIATIONS - MEMBERSHIP IN NDHIA JANUARY 1, 1976



STATE AND ASSOCIATIONS OF THE PLANNING IN HEALTH

JANUARY 1, 1976

Percent

5 - 9.9

10 - 19.9

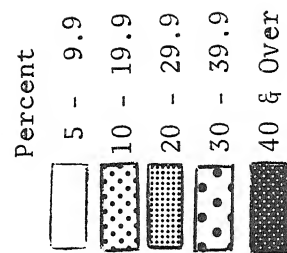
20 - 29.9

30 - 39.9

40 & Over

ALASKA

HAWAII



ALASKA

HAWAII

TABLE 1.--STATE DHIA'S, MEMBERSHIP IN NDHIA, INC., ASSOCIATIONS, AND SUPERVISORS: THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM, JANUARY 1, 1976

STATE AND PROGRAM	STATE DHIA	MEMBER OF NDHIA, INC.	ASSOCI- ATIONS	SUPER- VISORS	STATE AND PROGRAM	STATE DHIA	MEMBER OF NDHIA, INC.	ASSOCI- ATIONS	SUPER- VISORS
			NO.	NO.				NO.	NO.
ALABAMA-----	NO	NO	18	17	NEW HAMPSHIRE----	YES	YES	8	14
ALASKA-----	NO	NO	1	1	NEW JERSEY-----	YES	YES	5	14
ARIZONA-----	YES	YES	1	11	NEW MEXICO-----	YES	YES	3	8
ARKANSAS-----	YES	YES	21	21	NEW YORK-----	YES	YES	48	177
CALIFORNIA-----	YES	YES	26	110	NORTH CAROLINA---	YES	YES	26	46
COLORADO-----	YES	YES	17	23	NORTH DAKOTA-----	YES	YES	15	22
CONNECTICUT-----	YES	YES	7	17	OHIO-----	YES	YES	17	118
DELAWARE-----	YES	YES	3	3	OKLAHOMA-----	YES	YES	17	22
FLORIDA-----	YES	YES	11	15	OREGON-----	YES	YES	13	21
GEORGIA-----	YES	YES	22	25	PENNSYLVANIA-----	YES	YES	59	170
HAWAII-----	YES	NO	1	2	PUERTO RICO-----	YES	YES	1	9
IDAHO-----	YES	NO	24	29	RHODE ISLAND-----	YES	YES	2	2
ILLINOIS-----	YES	YES	49	71	SOUTH CAROLINA---	YES	YES	10	25
INDIANA-----	YES	YES	46	63	SOUTH DAKOTA-----	YES	YES	18	15
IOWA-----	YES	YES	60	81	TENNESSEE-----	YES	NO	29	33
KANSAS-----	YES	YES	47	60	TEXAS-----	YES	YES	26	40
KENTUCKY-----	YES	YES	40	50	UTAH-----	YES	YES	15	17
LOUISIANA-----	YES	YES	11	27	VERMONT-----	YES	YES	25	50
MAINE-----	YES	YES	12	29	VIRGINIA-----	YES	YES	38	52
MARYLAND-----	YES	YES	14	32	WASHINGTON-----	YES	YES	19	40
MASSACHUSETTS---	YES	YES	7	17	WEST VIRGINIA---	YES	YES	11	19
MICHIGAN-----	YES	YES	1	83	WISCONSIN-----	YES	YES	31	224
MINNESOTA-----	YES	YES	73	164	WYOMING-----	YES	YES	4	7
MISSISSIPPI-----	NO	NO	22	27					
MISSOURI-----	YES	YES	39	50					
MONTANA-----	NO	NO	6	8					
NEBRASKA-----	YES	YES	30	34	THE NATIONAL COOPERATIVE DHI PROGRAM-----	47	44	1,051	2,218
NEVADA-----	YES	YES	2	3					

TABLE 2.--PERCENTAGE OF COWS, BY STATE, INCLUDED IN THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM, JANUARY 1, 1976

STATE	PERCENT	STATE	PERCENT	STATE	PERCENT
HAWAII-----	76.1	MASSACHUSETTS----	35.9	MINNESOTA-----	25.2
SOUTH CAROLINA---	58.0	GEORGIA-----	35.5	LOUISIANA-----	24.5
NEVADA-----	57.5	KANSAS-----	35.3	WYOMING-----	24.2
CALIFORNIA-----	54.1	ALABAMA-----	35.2	OKLAHOMA-----	21.8
VIRGINIA-----	49.8	PENNSYLVANIA----	35.2	TENNESSEE-----	20.8
NEW MEXICO-----	49.6	NEW YORK-----	33.9	MISSISSIPPI---	20.4
CONNECTICUT-----	47.4	WEST VIRGINIA----	33.8	FLORIDA-----	19.9
ARIZONA-----	46.8	DELAWARE-----	32.7	NEBRASKA-----	18.7
WASHINGTON-----	44.1	VERMONT-----	31.5	RHODE ISLAND---	17.3
OREGON-----	43.6	WISCONSIN-----	31.5	MISSOURI-----	16.4
UTAH-----	43.3	OHIO-----	31.2	SOUTH DAKOTA---	14.5
NORTH CAROLINA---	40.9	MICHIGAN-----	30.9	TEXAS-----	13.9
NEW HAMPSHIRE----	40.5	ILLINOIS-----	30.5	ARKANSAS-----	12.9
MAINE-----	40.1	INDIANA-----	28.0	ALASKA-----	12.5
NEW JERSEY-----	37.5	MONTANA-----	26.4	KENTUCKY-----	11.3
MARYLAND-----	36.8	IDAHO-----	25.7	NORTH DAKOTA---	6.8
COLORADO-----	36.1	IOWA-----	25.3	UNITED STATES--	31.4

TABLE 3.--THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM AND OTHER TESTING PLANS, JANUARY 1, 1976 1/

STATE	OFFICIAL DHI AND DHIR		OWNER-SAMPLER		ALTERNATE AH-PM		OTHER UNOFFICIAL PLANS 2/		ALL TESTING PLANS		U.S. MILK COWS 3/	PCT. IN ALL PLANS
	HERDS	COWS	HERDS	COWS	HERDS	COWS	HERDS	COWS	HERDS	COWS		
	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	THOU.	
ALABAMA-----	225	27,627	27	4,086	---	---	---	---	252	31,713	90	35.2
ALASKA-----	1	67	3	182	---	---	---	---	4	249	2	12.5
ARIZONA-----	86	31,820	---	---	---	---	---	---	86	31,820	68	46.8
ARKANSAS-----	115	7,030	39	4,132	---	---	2	351	156	11,513	89	12.9
CALIFORNIA-----	1,107	354,614	42	4,194	---	---	228	79,655	1,377	438,463	810	54.1
COLORADO-----	232	23,785	13	1,095	---	---	13	2,169	258	27,049	75	36.1
CONNECTICUT-----	300	23,217	29	1,312	---	---	9	1,092	338	25,621	54	47.4
DELAWARE-----	43	3,171	---	---	10	756	---	---	53	3,927	12	32.7
FLORIDA-----	54	15,817	2	295	1	371	46	19,964	103	36,447	196	18.6
GEORGIA-----	273	32,631	2	93	---	---	80	13,007	355	45,731	129	35.5
HAWAII-----	10	3,994	2	982	---	---	13	5,681	25	10,657	14	76.1
IDaho-----	438	31,920	39	2,404	13	1,675	6	1,048	496	37,047	144	25.7
ILLINOIS-----	1,101	59,424	216	9,273	---	---	115	5,820	1,432	74,517	244	30.5
INDIANA-----	818	46,757	283	12,840	---	---	---	---	1,101	59,597	213	28.0
IOWA-----	1,532	68,811	798	29,959	5	171	6	225	2,341	99,166	392	25.3
KANSAS-----	696	43,950	110	5,400	---	---	4	1,180	810	50,530	143	35.3
KENTUCKY-----	408	24,849	39	3,276	---	---	56	4,004	503	32,129	285	11.3
LOUISIANA-----	303	29,370	1	81	---	---	49	4,351	353	33,802	138	24.5
MAINE-----	377	20,616	39	1,493	---	---	18	1,932	434	24,041	60	40.1
MARYLAND-----	581	48,461	48	2,477	---	---	13	988	642	51,926	141	36.8
MASSACHUSETTS----	286	18,188	22	731	---	---	7	847	315	19,766	55	35.9
MICHIGAN-----	1,229	89,408	653	33,957	---	---	91	6,773	1,973	130,138	421	30.9
MINNESOTA-----	3,358	152,417	1,992	71,419	11	412	2	222	5,363	224,470	890	25.2
MISSISSIPPI-----	241	21,778	17	1,537	---	---	6	590	264	23,905	117	20.4
MISSOURI-----	598	39,979	174	9,145	---	---	---	---	772	49,124	300	16.4
MONTANA-----	62	5,804	9	1,047	---	---	---	---	71	6,851	26	26.4
NEBRASKA-----	396	24,442	59	2,950	1	95	5	224	461	27,711	148	18.7
NEVADA-----	34	6,696	3	1,350	---	---	---	---	37	8,046	14	57.5
NEW HAMPSHIRE----	190	11,285	35	1,043	---	---	11	1,049	236	13,377	33	40.5
NEW JERSEY-----	225	16,345	10	380	---	---	1	145	236	16,870	45	37.5
NEW MEXICO-----	31	15,151	2	216	---	---	---	---	33	15,367	31	49.6
NEW YORK-----	3,015	190,257	1,194	54,376	896	50,524	192	15,714	5,297	310,871	916	33.9
NORTH CAROLINA----	619	58,196	26	1,585	---	---	32	2,760	677	62,541	153	40.9
NORTH DAKOTA-----	115	6,273	13	1,115	---	---	14	680	142	8,068	119	67.8
OHIO-----	1,531	86,842	769	33,560	20	1,281	---	---	2,320	121,683	390	31.2
OKLAHOMA-----	326	24,038	21	908	---	---	4	540	351	25,486	117	21.8
OREGON-----	354	35,675	31	1,150	---	---	19	2,445	404	39,270	90	43.6
PENNSYLVANIA-----	3,166	169,723	916	36,722	784	41,723	---	---	4,866	248,168	706	35.2
PUERTO RICO-----	78	17,731	---	---	---	---	15	3,707	93	21,438	---	---
RHODE ISLAND-----	20	1,038	---	---	---	---	---	---	20	1,038	6	17.3
SOUTH CAROLINA----	238	29,752	11	782	---	---	7	601	256	31,135	54	58.0
SOUTH DAKOTA-----	180	9,748	266	11,758	---	---	18	1,049	464	22,555	156	14.5
TENNESSEE-----	495	40,279	2	57	---	---	46	3,771	543	44,107	212	20.8
TEXAS-----	334	37,527	41	4,575	---	---	17	2,411	392	44,513	320	13.9
UTAH-----	326	31,924	16	784	---	---	12	1,528	354	34,236	79	43.3
VERMONT-----	707	41,633	336	16,379	41	2,951	1	128	1,085	61,091	194	31.5
VIRGINIA-----	840	75,774	41	3,350	---	---	1	102	882	79,226	159	49.8
WASHINGTON-----	624	68,277	53	3,121	9	1,410	37	6,075	723	78,883	179	44.1
WEST VIRGINIA----	174	12,542	6	231	---	---	11	423	191	13,196	39	33.8
WISCONSIN-----	3,708	198,807	8,849	348,808	564	22,221	21	827	13,142	570,663	1,810	31.5
WYOMING-----	32	2,905	---	---	---	---	---	---	32	2,905	12	24.2
THE NATIONAL COOPERATIVE DHI PROGRAM ----	32,232	2,438,365	17,299	726,610	2,355	123,590	1,228	194,078	53,114	3,482,643	11,092	31.4
OTHER TESTING 4/-									946	37,811	11,092	.3
ALL PLANS-----									54,060	3,520,454	11,092	31.7

1/ DASHES INDICATE PLAN IS NOT IN OPERATION IN STATE OR DATA UNAVAILABLE OR NOT REPORTED.

2/ UNOFFICIAL PLANS OPERATING UNDER THE AUSPICES OF THE NCDHIP. THESE PLANS ARE DETAILED IN TABLES 7 AND 8.

3/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976.

4/ THE FOLLOWING NUMBER OF HERDS AND COWS ARE ON OTHER TESTING PLANS NOT INCLUDED IN THE NCDHIP, SUCH AS VOCATIONAL AGRICULTURE AND PRIVATE, BY STATE: FLORIDA, 6 HERDS, 2,500 COWS; SOUTH CAROLINA, 3 HERDS, 181 COWS; VIRGINIA, 12 HERDS, 360 COWS; WISCONSIN, 925 HERDS, 34,770 COWS.

TABLE 4.--OFFICIAL DHI AND DHIR RECORDKEEPING IN THE UNITED STATES, JANUARY 1, 1976

STATE	HERDS	COWS	CHANGE FROM 1/1/75	COWS PER HERD	U.S. MILK COWS 1/ THOU.	PCT. OF U.S. COWS
	NO.	NO.	NO.	NO.		
ALABAMA-----	225	27,627	-1,117	122.8	90	36.7
ALASKA-----	1	67	+23	67.0	2	3.4
ARIZONA-----	86	31,820	-350	370.0	68	4.7
ARKANSAS-----	115	7,030	-23	61.1	89	7.9
CALIFORNIA-----	1,107	354,614	-5,220	320.3	810	43.8
COLORADO-----	232	23,785	-848	102.5	75	31.7
CONNECTICUT-----	300	23,217	+1,043	77.4	54	43.0
DELAWARE-----	43	3,171	-55	73.7	12	26.4
FLORIDA-----	54	15,817	-2,061	292.9	196	8.1
GEORGIA-----	273	32,631	-686	119.5	129	25.3
HAWAII-----	10	3,994	-1,450	399.4	14	28.5
IDAHO-----	438	31,920	+823	72.9	144	22.2
ILLINOIS-----	1,101	59,424	+1,375	54.0	244	24.4
INDIANA-----	818	46,757	+1,343	57.2	213	22.0
IOWA-----	1,532	68,811	+269	44.9	392	17.6
KANSAS-----	696	43,950	-3,075	63.1	143	30.7
KENTUCKY-----	408	24,849	-703	60.9	285	8.7
LOUISIANA-----	303	29,370	+867	96.9	138	21.3
MAINE-----	377	20,616	+2,176	54.7	60	34.4
MARYLAND-----	581	48,461	+493	83.4	141	34.4
MASSACHUSETTS----	286	18,188	+1,086	63.6	55	33.1
MICHIGAN-----	1,229	89,408	+1,772	72.7	421	21.2
MINNESOTA-----	3,358	152,417	+53	45.4	890	17.1
MISSISSIPPI-----	241	21,778	-254	90.4	117	18.6
MISSOURI-----	598	39,979	-1,123	66.9	300	13.3
MONTANA-----	62	5,804	+799	93.6	26	22.3
NEBRASKA-----	396	24,442	-1,779	61.7	148	16.5
NEVADA-----	34	6,696	-1,053	196.9	14	47.8
NEW HAMPSHIRE----	190	11,285	+704	59.4	33	34.2
NEW JERSEY-----	225	16,345	+49	72.6	45	36.3
NEW MEXICO-----	31	15,151	+2,072	488.7	31	48.9
NEW YORK-----	3,015	190,257	-1,029	63.1	916	20.8
NORTH CAROLINA----	619	58,196	-11	94.0	153	38.0
NORTH DAKOTA-----	115	6,273	-428	54.5	119	5.3
OHIO-----	1,531	86,842	-1,169	56.7	390	22.3
OKLAHOMA-----	326	24,038	-2,332	73.7	117	20.5
OREGON-----	354	35,675	-1,653	100.8	90	39.6
PENNSYLVANIA-----	3,166	169,723	+3,556	53.6	706	24.0
PUERTO RICO-----	78	17,731	+1,778	227.3	---	---
RHODE ISLAND-----	20	1,038	-286	51.9	6	17.3
SOUTH CAROLINA----	238	29,752	+88	125.0	54	55.1
SOUTH DAKOTA-----	180	9,748	-514	54.2	156	6.2
TENNESSEE-----	495	40,279	+1,805	81.4	212	19.0
TEXAS-----	334	37,527	-2,528	112.4	320	11.7
UTAH-----	326	31,924	-1,084	97.9	79	40.4
VERMONT-----	707	41,633	-1,108	58.9	194	21.5
VIRGINIA-----	840	75,774	+2,635	90.2	159	47.7
WASHINGTON-----	624	68,277	+3,657	109.4	179	38.1
WEST VIRGINIA----	174	12,542	+526	72.1	39	32.2
WISCONSIN-----	3,708	198,807	+7,750	53.6	1,812	11.0
WYOMING-----	32	2,905	+601	90.8	12	24.2
UNITED STATES----	32,232	2,438,365	+5,404	75.7	11,092	22.0

1/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976. DASHES INDICATE STATE COW NUMBERS NOT AVAILABLE.

TABLE 5.--DAIRY HERD IMPROVEMENT REGISTRY RECORDKEEPING IN THE UNITED STATES, JANUARY 1, 1976 1/

STATE	HERDS	COWS	CHANGE FROM 1/1/75	COWS PER HERD	U.S. MILK COWS 2/	PCT. OF U.S. COWS
	NO.	NO.	NO.	NO.	THOU.	
ALABAMA-----	13	1,876	+95	144.3	90	2.1
ALASKA-----	1	67	+23	67.0	2	3.3
ARIZONA-----	22	5,790	-90	263.2	68	8.5
ARKANSAS-----	18	779	+34	43.3	89	.9
CALIFORNIA-----	110	30,711	+1,318	280.0	810	3.8
COLORADO-----	38	3,578	+155	94.2	75	4.8
CONNECTICUT-----	49	3,360	-134	68.6	54	6.2
DELAWARE-----	4	270	-88	67.5	12	2.3
FLORIDA-----	6	3,035	-1,216	505.8	196	1.5
GEORGIA-----	14	2,201	-128	157.2	129	1.7
HAWAII-----	(3/)	(3/)	(3/)	(3/)	14	(3/)
IDAHO-----	24	1,608	-390	67.0	144	1.1
ILLINOIS-----	136	6,545	-697	48.1	244	2.7
INDIANA-----	115	6,060	-308	52.7	213	2.8
IOWA-----	164	7,207	-167	43.9	392	1.8
KANSAS-----	71	4,015	-90	56.5	143	2.8
KENTUCKY-----	47	2,749	+275	58.5	285	1.0
LOUISIANA-----	12	1,369	+229	114.1	138	1.0
MAINE-----	47	2,792	+204	59.4	60	4.7
MARYLAND-----	49	4,924	+16	100.5	141	3.5
MASSACHUSETTS---	45	3,122	+1,612	69.4	55	5.7
MICHIGAN-----	78	6,038	+231	77.4	421	1.4
MINNESOTA-----	159	7,062	+412	44.4	890	.8
MISSISSIPPI-----	23	1,873	+151	81.4	117	1.6
MISSOURI-----	46	2,986	-518	64.9	300	1.0
MONTANA-----	10	855	-86	85.5	26	3.3
NEBRASKA-----	49	3,066	-257	62.6	148	2.1
NEVADA-----	10	1,233	+330	123.3	14	8.8
NEW HAMPSHIRE----	36	2,205	+131	61.3	33	6.7
NEW JERSEY-----	26	1,905	-512	73.3	45	4.2
NEW MEXICO-----	8	3,023	-2,026	377.9	31	9.8
NEW YORK-----	221	13,088	+677	59.2	916	1.4
NORTH CAROLINA---	33	3,408	-99	103.3	153	2.2
NORTH DAKOTA-----	9	525	-105	58.3	119	.4
OHIO-----	283	15,591	+324	55.1	390	4.0
OKLAHOMA-----	56	3,753	+539	67.0	117	3.2
OREGON-----	45	4,540	+485	100.9	90	5.0
PENNSYLVANIA-----	144	8,731	+104	60.6	706	1.2
PUERTO RICO-----	(3/)	(3/)	(3/)	(3/)	---	---
RHODE ISLAND-----	6	267	-247	44.5	6	4.5
SOUTH CAROLINA---	39	5,187	+277	133.0	54	9.6
SOUTH DAKOTA-----	21	1,011	+62	48.1	156	.6
TENNESSEE-----	37	3,209	-94	86.7	212	8.7
TEXAS-----	55	6,452	-801	117.3	320	2.0
UTAH-----	23	2,124	+100	92.3	79	2.7
VERMONT-----	105	6,152	+153	58.6	194	3.2
VIRGINIA-----	65	6,341	-408	97.6	159	4.0
WASHINGTON-----	83	8,027	-713	96.7	179	4.5
WEST VIRGINIA----	13	1,134	+92	87.2	39	2.9
WISCONSIN-----	525	28,281	+1,351	53.9	1,812	1.6
WYOMING-----	5	470	-50	94.0	12	3.9
UNITED STATES----	3,198	240,603	+164	75.2	11,092	2.2

1/ INCLUDED IN COUNT OF OFFICIAL HERDS IN TABLES 3 AND 4.

2/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976.

DASHES INDICATE STATE COW NUMBERS NOT AVAILABLE.

3/ NO PARTICIPATION IN DHIR TESTING REPORTED.

TABLE 6.--OWNER-SAMPLER RECORDKEEPING IN THE UNITED STATES, JANUARY 1, 1976

STATE	HERDS	COWS	CHANGE FROM 1/1/75	COWS PER HERD	U.S. MILK COWS 1/	PCT. OF U.S. COWS
	NO.	NO.	NO.	NO.	THOU.	
ALABAMA-----	27	4,086	+545	151.3	90	4.5
ALASKA-----	3	182	-4	60.7	2	9.1
ARIZONA-----	(2/)	(2/)	-243	(2/)	68	(2/)
ARKANSAS-----	39	4,132	-362	105.9	89	4.6
CALIFORNIA-----	42	4,194	-1,245	99.9	810	.5
COLORADO-----	13	1,095	+302	84.2	75	1.5
CONNECTICUT-----	29	1,312	+123	45.2	54	2.4
DELAWARE-----	(2/)	(2/)	(2/)	(2/)	12	(2/)
FLORIDA-----	2	295	+97	147.5	196	.2
GEORGIA-----	2	93	+11	46.5	129	.1
HAWAII-----	2	982	+82	491.0	14	7.0
IDAHO-----	39	2,404	-136	61.6	144	1.7
ILLINOIS-----	216	9,273	-114	42.9	244	3.8
INDIANA-----	283	12,840	-1,347	45.4	213	6.0
IOWA-----	798	29,959	-478	37.5	392	7.6
KANSAS-----	110	5,400	-928	49.1	143	3.8
KENTUCKY-----	39	3,276	+1,725	84.0	285	1.1
LOUISIANA-----	1	81	0	81.0	138	.1
MAINE-----	39	1,493	-136	38.3	60	2.5
MARYLAND-----	48	2,477	-249	51.6	141	1.8
MASSACHUSETTS----	22	731	-935	33.2	55	1.3
MICHIGAN-----	653	33,957	-2,498	52.0	421	8.1
MINNESOTA-----	1,992	71,419	-5,091	35.9	890	8.0
MISSISSIPPI-----	17	1,537	+689	90.4	117	1.3
MISSOURI-----	174	9,145	-452	52.6	300	3.0
MONTANA-----	9	1,047	-210	116.3	26	4.0
NEBRASKA-----	59	2,950	+290	50.5	148	2.0
NEVADA-----	3	1,350	+1,028	450.0	14	9.6
NEW HAMPSHIRE----	35	1,043	-374	29.8	33	3.2
NEW JERSEY-----	10	380	+33	38.0	45	.8
NEW MEXICO-----	2	216	-146	108.0	31	.7
NEW YORK-----	1,194	54,376	-5,220	45.5	916	5.9
NORTH CAROLINA---	26	1,585	+149	61.0	153	1.0
NORTH DAKOTA-----	13	1,115	+252	85.8	119	.9
OHIO-----	769	33,560	-438	43.6	390	8.6
OKLAHOMA-----	21	908	-923	42.9	117	.8
OREGON-----	31	1,150	+96	37.1	90	1.3
PENNSYLVANIA-----	916	36,722	-2,044	40.1	706	5.2
PUERTO RICO-----	(2/)	(2/)	(2/)	(2/)	---	---
RHODE ISLAND-----	(2/)	(2/)	(2/)	(2/)	6	(2/)
SOUTH CAROLINA---	11	782	+208	71.1	54	1.4
SOUTH DAKOTA-----	266	11,758	-818	44.2	156	7.5
TENNESSEE-----	2	57	-136	28.5	212	.0
TEXAS-----	41	4,575	-650	111.6	320	1.4
UTAH-----	16	784	-165	49.0	79	1.0
VERMONT-----	336	16,379	-909	48.7	194	8.4
VIRGINIA-----	41	3,350	+684	81.7	159	2.1
WASHINGTON-----	53	3,121	+208	58.9	179	1.7
WEST VIRGINIA----	6	231	-110	38.5	39	.6
WISCONSIN-----	8,849	348,808	-3,323	39.4	1,812	19.2
WYOMING-----	(2/)	(2/)	-35	(2/)	12	(2/)
UNITED STATES----	17,299	726,610	-23,197	42.0	11,092	6.6

1/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976. DASHES INDICATE STATE COW NUMBERS NOT AVAILABLE.

2/ NO PARTICIPATION IN OWNER-SAMPLER TESTING REPORTED.

TABLE 7.--ALTERNATE AM-PM, COMMERCIAL, AND WEIGH-A-DAY-A-MONTH RECORDKEEPING IN THE UNITED STATES, JANUARY 1, 1976

STATE	HERDS NO.	COWS NO.	CHANGE FROM 1/1/75 NO.	COWS PER HERD NO.	U.S. MILK COWS 2/ THOU.	PCT. OF U.S. COWS
<u>ALTERNATE AM-PM</u>						
DELAWARE-----	10	756	+756	75.6	12	6.3
FLORIDA-----	1	271	+371	371.0	196	.2
IDAHO-----	13	1,675	+508	128.8	144	1.2
IOWA-----	5	171	+171	34.2	392	.04
KANSAS-----			-184			
MAINE-----			-72			
MINNESOTA-----	11	412	+412	37.5	890	.05
NEBRASKA-----	1	95	+95	95.0	148	.06
NEW YORK----- (DHI-AP)	750	43,524	+10,151	58.0	916	4.8
NEW YORK----- (OS-AP)	146	7,000	-605	47.9	916	.8
NEW YORK----- (MOR-AP)	(INCLUDED IN TABLE 8)		-2,888			
OHIO-----	20	1,281	+997	64.1	390	.3
PENNSYLVANIA-----	784	41,723	-915	53.2	706	5.9
VERMONT----- (DHI)	31	2,140	+1,129	69.0	194	1.1
VERMONT----- (OS)	10	811	+385	81.1	194	.4
WASHINGTON-----	9	1,410	+48	156.7	179	.8
WISCONSIN-----	564	22,221	+2,061	39.4	1,812	1.2
UNITED STATES----	2,355	123,590	+12,420	52.5	11,092	1.1
<u>COMMERCIAL</u>						
CALIFORNIA-----	228	79,655	+7,124	349.4	810	9.8
COLORADO-----	10	1,994	+15	199.4	75	2.7
IDAHO-----	5	842	+842	168.4	144	.6
MARYLAND-----	10	840	+21	84.0	141	.6
NEW MEXICO-----			-1,483			
UTAH-----	9	1,333	+1,273	148.1	79	1.7
WASHINGTON-----	37	6,075	+6,075	164.2	179	3.4
UNITED STATES----	299	90,739	+13,867	303.5	11,092	.8
<u>WEIGH-A-DAY-A-MONTH</u>						
COLORADO-----	3	175	-52	58.3	75	.2
FLORIDA-----			-2,500			
IA-----	56	8,939	-499	159.6	129	6.9
-----	13	5,681	+1,577	437.0	14	40.6
-----	1	206	+206	206.0	144	.1
-----	115	5,820	-304	50.6	244	2.4
-----	6	225	+8	37.5	392	.1
-----			-140			
-----	5	250	-115	50.0	285	.1
-----	49	4,351	-329	88.8	138	3.2
-----	3	148	+25	49.3	141	.1
-----	6	590	-252	98.3	117	.5
-----	4	165	+8	41.3	148	.1
-----	6	400	+18	66.7	33	1.2
-----	23	1,387	-58	60.3	153	.9
-----		643	+36	49.5	119	.5
-----		195	-436	195.0	90	.2
-----		3,707	-272	247.1	---	---
-----		601	+59	85.9	54	1.1
-----		771	+1,456	82.0	212	1.8
-----			-677	141.8	320	.8
-----			-20	65.0	79	.2
-----			-3	102.0	159	.1
-----			-210			
-----			-34	38.5	39	1.1
-----			-160			
UNITED STATES----	404	40,385	-2,237	100.0	11,092	.4
UNITED STATES THREE PLANS TOTAL	3,058	254,714	+26,762	83.3	11,092	2.3

1/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976.
DASHES INDICATE STATE COW NUMBERS NOT AVAILABLE.

TABLE 8.--MILK-ONLY RECORDS AND OTHER UNOFFICIAL RECORDKEEPING IN THE UNITED STATES, JANUARY 1, 1976

STATE	PLAN	HERDS NO.	COWS NO.	CHANGE FROM 1/6/75 NO.	COWS PER HERD NO.	U.S. MILK COWS THOU.	PCT. OF U.S. COWS
<u>MILK-ONLY RECORDS</u>							
ARKANSAS-----	MOR-----			-198			
CONNECTICUT-----	MOR-----	9	1,092	-282	121.3	54	2.0
FLORIDA-----	SUPERVISED M-O-----	43	16,268	+2,136	378.3	196	8.3
GEORGIA-----	M-O-----	24	4,068	+1,121	169.5	129	3.2
KANSAS-----	MILK ONLY-----	4	1,180	+1,024	295.0	143	.8
MAINE-----	MOR-AP-----			-100			
MAINE-----	MOR-----			-1,272			
MASSACHUSETTS-----	MILK ONLY RECORD-----	7	847	+847	121.0	55	1.5
MICHIGAN-----	DHMO-----	6	1,316	+1,316	219.3	421	.3
MICHIGAN-----	OSMO-----	39	2,945	+2,945	75.5	421	.7
MINNESOTA-----	MOR-----	2	222	+222	111.0	890	.02
NEBRASKA-----	M-O-----	1	59	+59	59.0	148	.04
NEW HAMPSHIRE-----	MOR-----	5	649	+395	129.8	33	2.0
NEW JERSEY-----	OS MOR-----	1	145	-2	145.0	45	.3
NEW YORK-----	MOR-----	158	13,002	-415	82.3	916	1.4
NEW YORK-----	MOR-AP-----	34	2,712	+2,712	79.8	916	.3
NORTH CAROLINA-----	MILK ONLY-----	9	1,373	+149	152.6	153	.9
NORTH DAKOTA-----	MILK ONLY-----	1	37	+37	37.0	119	.0
OKLAHOMA-----	MILK ONLY-----	4	540	+138	135.0	117	.0
SOUTH DAKOTA-----	MILK-ONLY-----	18	1,049	+211	58.3	156	.0
VERMONT-----	MOR-----	1	128	-1	128.0	194	.0
WISCONSIN-----	MOR-----	21	827	+827	39.4	1,812	.0
UNITED STATES-----	-----	387	48,459	+11,869	125.2	11,092	.4
<u>ALL OTHER</u>							
ARKANSAS-----	(UNSPECIFIED)-----	2	351	+351	175.5	89	.4
DELAWARE-----	(UNSPECIFIED)-----			-938			
FLORIDA-----	UNSUPERVISED, UNAPPROVED METERS, OTHER-----	3	3,696	+2,005	1,232.0	196	1.9
IDAHO-----	TSTR-----			-803			
KENTUCKY-----	BASIC-----	51	3,754	+1,479	73.6	285	1.3
MAINE-----	(UNSPECIFIED)-----	18	1,932	+1,932	107.3	60	3.2
MICHIGAN-----	TMT-----	46	2,512	-590	54.6	421	.6
MICHIGAN-----	DHMO-OSMO-TMMO-----			-2,854			
NORTH DAKOTA-----	(UNSPECIFIED)-----			-670			
OREGON-----	COM'L OR TESTER SAMPLED-----	11	1,650	+136	150.0	90	1.8
OREGON-----	HAND CALCULATED-----	7	600	-1,400	85.7	90	.7
PUERTO RICO-----	GENERAL FARM RECORDS-----			-3,568			
SOUTH CAROLINA-----	BASIC MANAGEMENT-----			-247			
WASHINGTON-----	TESTER-SAMPLER-----			-5,918			
UNITED STATES-----	-----	138	14,495	-11,085	106.9	11,092	.1
TOTAL FOR MILK-ONLY AND OTHER UNOFFICIAL PLANS		525	62,954	+785	119.9	11,092	.6

1/ PRELIMINARY FIGURES FOR JANUARY 1, 1976, NUMBERS OF MILK COWS AND HEIFERS THAT HAVE CALVED, EXCLUDING HEIFERS NOT YET FRESH; ESTIMATED BY THE STATISTICAL REPORTING SERVICE (USDA) IN 'CATTLE', FEBRUARY 1976.
DASHES INDICATE STATE COW NUMBERS NOT AVAILABLE.

TABLE 9.--ENROLLMENT IN THE OFFICIAL PLANS IN THE UNITED STATES AND PERCENT OF COWS ON TEST, JANUARY 1, 1940-76 1/

OFFICIAL DHI AND DHIR													
YEAR	ASSOCIATIONS 2/	SUPERVISORS 3/	HERDS	COWS	COWS	PCT. OF U.S. COWS	HERDS REPORTED	COWS	AVERAGE PRODUCTION			U.S. MILK COWS	PCT. IN ALL PLANS
			EN-ROLLED	EN-ROLLED	PER HERD			REPORTED	MILK	FAT	FAT		
	NO.	NO.	NO.	NO.	NO.		NO.	NO.	LB	PCT	LB	THOU.	
1940----	1,300	---	27,948	676,141	24.2	2.91	---	545,382	8,133	4.07	331	4/23,273	2.91
1941----	1,383	---	31,381	763,502	24.3	3.23	---	591,103	8,225	4.07	335	23,671	3.23
1942----	1,421	---	32,957	816,117	24.8	3.36	---	514,758	8,323	4.07	339	24,288	3.36
1943----	1,057	---	24,155	616,972	25.5	2.47	---	375,914	8,325	4.06	338	25,027	2.47
1944----	954	---	20,825	561,587	27.0	2.21	---	383,337	8,296	4.05	336	25,451	2.21
1945----	949	---	21,254	577,200	27.2	2.25	---	384,360	8,592	4.03	346	25,597	2.25
1946----	1,124	---	23,331	627,878	27.0	2.51	---	413,554	8,635	4.04	349	25,033	2.51
1947----	1,426	---	28,812	775,546	26.9	3.22	---	533,061	8,638	4.03	348	24,089	3.22
1948----	1,668	---	33,274	886,129	26.6	3.80	---	620,385	8,675	4.03	350	23,329	3.80
1949----	1,787	---	35,851	943,939	26.3	4.23	---	729,150	8,907	4.03	359	22,336	4.23
1950----	1,973	---	40,100	1,088,872	27.2	4.94	---	836,922	9,172	4.03	370	22,624	4.94
1951----	2,143	---	42,949	1,186,615	27.6	5.41	---	885,859	9,195	4.02	370	21,944	5.41
1952----	2,109	---	40,105	1,166,297	29.1	5.42	---	928,376	9,192	3.98	366	21,505	5.42
1953----	2,151	---	40,983	1,226,588	29.9	5.75	---	1,020,326	9,253	3.98	368	21,338	5.75
1954----	2,175	---	41,254	1,311,698	31.8	6.05	---	1,079,557	9,363	3.97	372	21,691	6.05
1955----	2,288	---	41,240	1,333,866	32.3	6.18	---	1,175,378	9,502	3.95	375	21,581	6.18
1956----	2,266	---	40,984	1,406,306	34.4	6.68	---	1,229,971	9,713	3.94	383	21,044	5/8.46
1957----	1,700	2,310	41,638	1,479,799	35.5	7.22	---	1,256,129	9,894	3.93	389	20,501	6/9.30
1958----	1,544	2,293	39,985	1,548,884	38.7	7.83	---	1,345,750	10,068	3.91	394	19,774	10.71
1959----	1,500	2,337	40,284	1,607,538	39.9	8.59	---	1,406,665	10,327	3.88	401	18,711	11.93
1960----	1,509	2,397	41,293	1,746,752	42.3	9.76	---	7/1,343,725	7/10,561	3.87	7/409	17,901	13.63
1961----	1,395	2,448	42,558	1,867,469	43.9	10.66	28,649	1,280,785	10,796	3.87	418	17,515	14.81
1962----	1,436	2,472	42,034	1,958,355	46.6	11.36	32,794	1,531,826	11,032	3.86	426	17,243	15.82
1963----	1,441	2,516	41,937	2,006,534	47.8	11.91	35,378	1,674,803	11,286	3.85	434	16,842	16.53
1964----	1,420	2,474	40,670	2,010,144	49.4	12.36	35,689	1,746,475	11,685	3.83	447	16,260	17.36
1965----	1,424	2,439	40,075	2,087,581	52.1	13.32	35,604	1,821,252	11,976	3.82	457	15,677	18.90
1966----	1,418	2,378	38,879	2,058,592	52.9	13.77	34,886	1,852,533	12,127	3.81	462	14,954	19.76
1967----	1,344	2,319	37,683	2,098,919	55.7	15.22	34,515	1,890,024	12,307	3.80	468	8/13,793	21.59
1968----	1,318	2,304	36,869	2,131,929	57.8	16.06	33,560	1,924,200	12,397	3.80	471	13,273	22.82
1969----	1,289	2,250	35,617	2,138,953	60.1	16.65	33,130	1,959,647	12,553	3.79	476	12,847	23.55
1970----	1,267	2,225	34,308	2,122,011	61.9	16.87	31,138	1,937,390	12,750	3.79	483	9/12,578	24.81
1971----	1,274	2,201	33,996	2,218,402	65.3	17.87	30,699	1,995,463	13,000	3.76	489	12,414	25.71
1972----	1,247	2,186	33,197	2,244,685	67.6	18.28	30,190	2,050,132	13,226	3.75	496	12,279	26.12
1973----	1,231	2,164	33,578	2,359,611	70.3	20.25	30,826	2,177,626	13,287	3.76	499	11,651	28.65
1974----	1,130	2,209	33,146	2,416,669	72.9	21.42	30,280	2,221,349	13,163	3.75	493	11,284	30.21
1975----	1,105	2,183	32,222	2,432,961	75.5	21.69	29,543	2,216,817	13,421	3.76	505	11,211	31.00
1976----	1,051	2,218	32,232	2,438,365	75.7	21.98	---	---	---	---	---	11,092	31.39

1/ DASHES INDICATE DATA NOT REPORTED OR CALCULATED.

2/ NUMBER OF ASSOCIATIONS INCLUDES ALL PLANS.

3/ PRIOR TO 1957, ASSOCIATIONS WERE COUNTED ON THE BASIS OF SUPERVISOR CIRCUITS. NUMBER OF SUPERVISORS INCLUDES ALL PLANS.

4/ FROM 1940 THROUGH 1966, U.S. COWS ARE THE AVERAGE NUMBER OF MILK COWS ON FARMS FOR THE PREVIOUS YEAR, EXCLUDING HEIFERS NOT YET FRESH. ESTIMATED BY THE STATIS. RPT. SERV., USDA.

5/ OWNER-SAMPLER TABULATION BEGAN IN 1956.

6/ WEIGH-A-DAY-1-MONTH TABULATION BEGAN IN 1957.

7/ NATIONAL TESTING YEAR CHANGED IN 1960 TO BEGIN MAY 1. THESE VALUES ARE AVERAGES OF 1959 AND 1961.

8/ FOR 1967 THROUGH 1969, AVERAGE NUMBER OF MILK COWS ON FARMS IN DECEMBER OF PREVIOUS YEAR, EXCLUDING HEIFERS NOT YET FRESH. ESTIMATED BY THE STATIS. RPT. SERV., USDA.

9/ BEGINNING 1970, NUMBER OF MILK COWS AND HEIFERS THAT HAVE CALVED JANUARY 1 OF STATED YEAR, EXCLUDING HEIFERS NOT YET FRESH. ESTIMATED BY THE STATIS. RPT. SERV., USDA.

TABLE 10.--ENROLLMENT IN THE OWNER-SAMPLER PLAN IN THE UNITED STATES, JANUARY 1, 1956-76 1/, 2/

YEAR	HERDS EN- ROLLED	COWS EN- ROLLED	COWS PER HERD	PCT. OF U.S. COWS	HERDS REPORTED	COWS REPORTED	AVERAGE PRODUCTION		
	NO.	NO.	NO.		NO.	NO.	MILK LB.	FAT PCT.	FAT LB.
1956-----	17,110	374,479	21.9	1.78	---	---	---	---	---
1957-----	20,778	405,090	19.5	1.98	---	---	---	---	---
1958-----	21,269	490,001	23.0	2.48	---	---	---	---	---
1959-----	22,807	549,916	24.1	2.94	---	---	---	---	---
1960-----	24,274	615,899	25.4	3.44	---	---	---	---	---
1961-----	24,498	655,885	26.8	3.74	---	---	---	---	---
1962-----	24,954	698,302	28.0	4.05	---	---	---	---	---
1963-----	25,376	726,478	28.6	4.31	14,761	423,545	10,606	3.73	396
1964-----	25,598	752,229	29.4	4.63	13,574	385,493	10,885	3.71	404
1965-----	26,604	818,406	30.8	5.22	18,409	559,608	11,402	3.71	423
1966-----	26,259	839,838	32.0	5.62	19,172	598,133	11,472	3.70	425
1967-----	25,439	825,127	32.4	5.98	17,912	575,816	11,607	3.72	432
1968-----	25,143	847,485	33.7	6.39	17,318	592,647	11,847	3.72	441
1969-----	24,359	842,330	34.6	6.56	17,908	614,939	11,932	3.72	444
1970-----	23,281	839,343	36.1	6.67	16,971	611,819	12,185	3.72	453
1971-----	22,581	836,751	37.1	6.74	16,569	612,080	12,413	3.71	460
1972-----	21,345	805,555	37.7	6.56	16,107	618,088	12,544	3.74	466
1973-----	20,895	806,270	38.6	6.92	16,183	631,269	12,488	3.75	468
1974-----	19,738	783,195	39.7	6.94	16,037	639,964	12,353	3.75	463
1975-----	18,112	749,807	41.4	6.69	14,704	610,910	12,503	3.80	475
1976-----	17,299	726,610	42.0	6.55	---	---	---	---	---

1/ DASHES INDICATE DATA NOT TABULATED OR AVAILABLE.

2/ TABULATION OF THE OWNER-SAMPLER PLAN BEGAN IN 1956.

TABLE 11.--ENROLLMENT IN OTHER UNOFFICIAL PLANS IN THE UNITED STATES, JANUARY 1, 1957-76 1/

YEAR	HERDS EN- ROLLED	COWS EN- ROLLED	COWS PER HERD	PCT. OF U.S. COWS	YEAR	HERDS EN- ROLLED	COWS EN- ROLLED	COWS PER HERD	PCT. OF U.S. COWS
NO.	NO.	NO.			NO.	NO.	NO.		
1957-----	1,174	21,297	18.1	0.10	1973-----	2,225	172,610	77.6	1.48
1958-----	3,629	79,489	21.9	.40	1974-----	2,675	208,962	78.1	1.85
1959-----	2,998	74,814	25.0	.40	1975-----	3,264	292,834	89.7	2.61
1960-----	3,119	76,392	24.5	.43	1976-----	3,583	317,668	88.7	2.86
1961-----	2,363	70,847	30.0	.40					
1962-----	1,936	70,617	36.5	.41					
1963-----	1,500	50,492	33.7	.30					
1964-----	1,396	60,149	43.1	.37					
1965-----	1,229	56,570	46.0	.36					
1966-----	1,160	56,957	49.1	.38					
1967-----	1,001	53,429	53.4	.39					
1968-----	867	48,853	56.3	.37					
1969-----	708	44,131	62.3	.34					
1970-----	2,040	158,789	77.8	1.26					
1971-----	1,935	136,304	70.4	1.10					
1972-----	2,108	156,593	74.3	1.28					

1/ TABULATION OF THE WEIGH-A-DAY-A-MONTH PLAN BEGAN IN 1957; TABULATION OF OTHER UNOFFICIAL PLANS OPERATING UNDER AUSPICES OF THE NCDHIP BEGAN IN 1970. THE COUNTS INCLUDE DATA RECEIVED FOR ALTERNATE AM-PH, COMMERCIAL, WADAM, MILK-ONLY RECORD, AND ALL OTHER UNOFFICIAL PLANS.

TABLE 12.--ASSOCIATIONS BY STATES WITH 40 PERCENT OR MORE COWS INCLUDED IN THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM, JANUARY 1, 1976 1/

STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP
PCT		PCT		PCT	
ALABAMA		FLORIDA		INDIANA (CONTINUED)	
LEE-----	98	COLUMBIA-----	100	HENDRICKS-----	53
MARSHALL-----	97	JEFFERSON-----	100	PARKE-----	53
ELMORE-----	95	PUTNAM-----	100	CASS-----	51
MONROE-----	93	ST. JOHNS-----	100	ELKHART-----	45
AUTAUGA-----	81	WASHINGTON-----	100	HOWARD-----	43
ESCAMBIA-----	79	GILCHRIST-----	92	MORGAN-----	43
GENEVA-----	78	ORANGE-----	83	HANCOCK-----	42
JEFFERSON-----	76	LAKE-----	75	LAPORTE-----	42
MARENGO-----	73	ESCAMBIA-----	64	CLARK-----	41
BLOUNT-----	69	MANATEE-----	56	RIPLEY-----	41
ETOWAH-----	69	BAKER-----	54	BOONE-----	40
MORGAN-----	66	ALACHUA-----	50		
RUSSELL-----	62	SARASOTA-----	43		
CONECUH-----	59			IOWA	
CULLMAN-----	54			DALLAS-----	71
HENRY-----	54	GEORGIA		WEBSTER-----	61
BULLOCK-----	50	CLARKE-----	100	POLK-----	58
MONTGOMERY-----	50	COOK-----	98	SCOTT-----	55
LIMESTONE-----	49	SCHLEY-----	98	DECATUR-----	54
BALDWIN-----	47	HEARD-----	96	HAMILTON-----	51
DEKALB-----	47	MCDUFFIE-----	95	STORY-----	51
HOUSTON-----	47	FAYETTE-----	93	BUENA VISTA-----	50
CHEROKEE-----	45	MACON-----	93	WARREN-----	48
MADISON-----	44	BROOKS-----	86	JASPER-----	45
MARION-----	41	LEE-----	85	JOHNSON-----	40
ST. CLAIR-----	40	JEFFERSON-----	84		
		WALTON-----	83	KANSAS	
ARIZONA		FLOYD-----	82	ELLIS-----	90
PIMA-----	100	SUMTER-----	81	MEADE-----	86
PINAL-----	75	CARROLL-----	80	DECATUR-----	70
YUMA-----	75	HOUSTON-----	80	SUMNER-----	68
MARICOPA-----	60	PEACH-----	80	RICE-----	65
COCHISE-----	50	JONES-----	76	DICKINSON-----	63
		HITCHELL-----	76	CHAUTAUQUA-----	60
ARKANSAS		THOMAS-----	76	WYANDOTTE-----	59
COLUMBIA-----	50	NEWTON-----	75	HASKELL-----	58
NEVADA-----	40	TIPT-----	73	COFFEY-----	55
		GWNNETT-----	72	LOGAN-----	54
CALIFORNIA		HENRY-----	70	SALINE-----	53
SANTA BARBARA-----	100	RICHMOND-----	70	SEDGWICK-----	52
YUBA-SUTTER-----	95	TATNALL-----	68	MARION-----	49
PLACER-NEVADA-----	74	DEKALB-----	65	ALLEN-----	48
SAN JOAQUIN-----	72	TWIGGS-----	65	HARVEY-----	48
VENTURA-----	71	BURKE-----	62	MCFERSON-----	48
FRESNO-----	70	MORGAN-----	60	PAWNEE-----	48
MADERA-----	67	COWETA-----	55	PRATT-----	48
NORTH BAY-----	67	BACON-----	45	RUSSELL-----	48
TULARE-----	66	BULLOCK-----	45	HARPER-----	47
KERN-----	65	JEFF DAVIS-----	40	DOUGLAS-----	46
CENTRAL COAST COUNTIES-----	58			GEARY-----	46
DEL NORTE-----	58	HAWAII		JEWELL-----	44
NORTH CENTRAL VALLEY-----	56	KAUAI-----	100	ANDERSON-----	43
STANISLAUS-----	56	MAUI-----	100	ELK-----	43
MERCED-----	55	OAHU-----	85	WABAMUNSEE-----	43
GLENN-----	44			WASHINGTON-----	43
SOUTHERN COUNTIES-----	43	ILLINOIS		COWLEY-----	41
HUMBOLDT-----	41	SANGAMON-----	85		
KINGS-----	40	MONROE-----	79	KENTUCKY	
TEHAMA-----	40	BROWN-----	73	FAYETTE-----	60
		LAWRENCE-----	73		
CONNECTICUT		KENDALL-----	69	LOUISIANA	
TOLLAND-----	80	MCLEAN-----	53	JACKSON-----	100
HARTFORD-----	56	HAMILTON-----	50	RAPIDES-----	100
LITCHFIELD-----	53	CHAMPAGN-----	47	BIENVILLE-----	82
NEW HAVEN-----	53	BOND-----	46	GRANT-----	81
NEW LONDON-MIDDLESEX-----	41	DEKALB-----	42	OUACHITA-----	78
		KANKAKEE-----	42	WEST BATON ROUGE-----	63
DELAWARE		LIVINGSTON-----	42	EAST BATON ROUGE-----	60
NEW CASTLE-----	43	RICHLAND-----	41	UNION-----	58
SUSSEX-----	41	COLES-----	40	EAST FELICIANA-----	57
		PEORIA-----	40	CATAHOULA-----	53
				IBERIA-----	53
		INDIANA		MOREHOUSE-----	53
		MADISON-----	66	LINCOLN-----	46
		PUTNAM-----	56	WEBSTER-----	40

TABLE 12.--ASSOCIATIONS BY STATES WITH 40 PERCENT OR MORE COWS INCLUDED IN THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM, JANUARY 1, 1976 (CONTINUED)

STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP
PCT		PCT		PCT	
MAINE		NEBRASKA		NORTH CAROLINA (CONTINUED)	
ANDROSCOGGIN-----	53	CASS-----	47	LENOIR-----	59
OXFORD-----	50	JEFFERSON-----	46	MADISON-----	59
CUMBERLAND-----	48	RICHARDSON-----	45	YADKIN-----	59
SOMERSET-----	46	THAYER-----	45	CLEVELAND-----	58
WALDO-----	46	DODGE-----	44	FORSYTH-----	58
		SARPY-----	40	CHATHAM-----	57
MARYLAND		NEVADA		SURRY-----	54
ANNE ARUNDEL-----	100			WAYNE-----	52
DORCHESTER-----	86	NEW HAMPSHIRE		WILSON-----	51
CECIL-----	55	CLARK-----	82	HARNETT-----	50
ALLEGANY-----	48	DOUGLAS-----	60	PERSON-----	47
HOWARD-----	48	LYON-----	44	HAYWOOD-----	46
HARFORD-----	45			BEAUFORT-----	45
KENT-----	45			CATAWBA-----	44
MONTGOMERY-----	44			MECKLENBURG-----	44
CARROLL-----	43			PENDER-----	44
MARVA ASS'N-----	43			BLADEN-----	43
				LINCOLN-----	43
MASSACHUSETTS				UNION-----	41
BARNSTABLE-----	90			OHIO	
BERKSHIRE-----	44			MARION-----	57
FRANKLIN-----	42			MADISON-----	52
				ALLEN-----	49
MICHIGAN				LORAIN-----	49
KALAMAZOO-----	53			PAULDING-----	48
CALHOUN-----	52			FULTON-----	47
BARRY-----	49			WARREN-----	47
HILLSDALE-----	45			WAYNE-----	46
CLINTON-----	44			SANDUSKY-----	43
LEWIS-----	42			VAN WERT-----	43
INGHAM-----	40			ASHLAND-----	42
SHIAWASSEE-----	40			ERIE-----	42
				RICHLAND-----	42
MINNESOTA				TUSCARAWAS-----	42
RAMSEY-----	100			HANCOCK-----	41
TRAVERSE-----	74			COLUMBIANA-MAHONING-----	40
LAKE OF THE WOODS-----	53				
HENNEPIN-----	52			OKLAHOMA	
GOODHUE-----	49			ATOKA-----	100
DAKOTA-----	46			PITTSBURG-----	100
PARISBAULT-----	46			GRANT-----	80
WASHINGTON-----	45			CARTER-----	66
WATONWAN-----	45			ALFALFA-----	55
MARTIN-----	43			CUSTER-----	50
WILKIN-----	40			GREER-----	50
JACKSON-----	44			LINCOLN-----	50
				MCINTOSH-----	50
MISSISSIPPI				WASHINGTON-----	50
HINDS-----	100			WOODWARD-----	50
LAMAR-----	98			ROGERS MILL-----	48
GEORGE-----	73			KAY-----	44
RANKIN-----	56			TULSA-----	43
MARION-----	48			OSAGE-----	41
MONTGOMERY-----	46			ROGERS-----	40
PIKE-----	46			TEXAS-----	40
MISSOURI					
JACKSON-----	61			OREGON	
CASS-----	48			JOSEPHINE-----	95
				POLK-----	76
MONTANA				BENTON-----	63
GALLATIN-----	59			WASHINGTON-----	61
LEWIS & CLARK-----	56			KLAMATH-----	60
FLATHEAD-----	44			LANE-----	60
RAVALLI-----	43			YAMHILL-----	60
				MARION-----	51
				CLATSOP-----	50
				UNION-----	50
				CLACKAMAS-----	49
				JACKSON-----	41
				PENNSYLVANIA	
				MONTGOMERY-----	68
				POTTER-----	59
				WARREN-----	59
				BLAIR-----	55

TABLE 12.--ASSOCIATIONS BY STATES WITH 40 PERCENT OR MORE COWS INCLUDED IN THE NATIONAL COOPERATIVE DAIRY HERD IMPROVEMENT PROGRAM, JANUARY 1, 1976 (CONTINUED)

STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP	STATE AND COUNTY OR ASSOCIATION	COWS ENROLLED IN NCDHIP
	PCT		PCT		PCT
PENNSYLVANIA (CONTINUED)		TEXAS (CONTINUED)		VIRGINIA (CONTINUED)	
HUNTINGDON-----	53	DEAF SMITH-----	52	PRINCE WILLIAM-----	56
DAUPHIN-----	49	COLLIN-----	50	CITY OF CHESAPEAKE-----	55
LANCASTER-----	49	VICTORIA-----	48	KING WILLIAM-----	55
SCHUYLKILL-----	49	ARCHER-----	40	ROCKINGHAM-----	53
CENTRE-----	46	WILLIAMSON-----	40	CULPEPER-----	52
ALLEGHENY-----	45			AMELIA-----	51
MCKEAN-----	45			APPOMATTOX-----	49
PERRY-----	45			PITTSYLVANIA-----	49
CHESTER-----	44	UTAH		SOUTHAMPTON-----	49
JUNIATA-----	44	SANPETE-----	80	SMYTH-----	48
BRADFORD-----	43	UTAH-----	80	ALBERMARLE-----	47
MIFFLIN-----	43	WEBER-----	72	WASHINGTON-----	47
CLINTON-----	42	SALT LAKE-----	70	YORK AND	
		DAVIS-----	65	CITY OF NEWPORT NEWS----	46
PUERTO RICO		SUMMIT-----	57	PLUVANNA-----	45
GUAYAMA-----	100	WASATCH-----	56	LOUDOUN-----	44
MAYAGUEZ-----	100	BEAVER-----	54	WISE-----	44
MOCA-----	100	MORGAN-----	52	MECKLENBURG-----	43
SAN GERMAN-----	100	CACHE-----	47	WYTHE-----	43
		EMERY-----	43	HALLPAX-----	41
		MILLARD-----	42		
SOUTH CAROLINA		VERMONT		WASHINGTON	
CALHOUN-----	75	BENNINGTON-----	68	KITTITAS-----	83
CLARENDON-----	73	WASHINGTON-----	55	CLALLAM-----	80
BAMBERG-----	72	WINDSOR-----	52	PACIFIC-----	62
NEWBERRY-----	68			CLARK-----	60
LEE-----	67	VIRGINIA		WABEKIAKUM-----	60
ORANGEBURG-----	67	ALLEGHENY-----	100	SKAGIT-----	53
JASPER-----	66	CLARKE-----	100	KLICKITAT-----	52
LAURENS-----	66	GREENE-----	100	SPOKANE-----	50
RICHLAND-----	66	NELSON-----	100	GRAYS HARBOR-----	48
SALUDA-----	65	KING GEORGE-----	96	SNOHOMISH-----	48
GREENVILLE-----	62	ROCKBRIDGE-----	91	PIERCE-----	44
SUMTER-----	61	CAROLINE-----	90	THURSTON-----	44
ANDERSON-----	52	MADISON-----	85	KING-----	43
PICKENS-----	50	PATRICK-----	85		
DARLINGTON-----	49	CAMPBELL-----	81	WEST VIRGINIA	
GREENWOOD-----	48	SHENANDOAH-----	81	JEFFERSON-----	50
LEXINGTON-----	48	PULASKI-----	80	MASON-----	45
FAIRFIELD-----	46	FRANKLIN-----	77	GREENBRIER-----	40
FLORENCE-----	46	JAMES CITY-----	76		
YORK-----	41	NOTTOWAY-----	75	WISCONSIN	
AIKEN-----	40	NANSEMOND-----	74	FLORENCE-----	59
SOUTH DAKOTA		HANOVER-----	71	KENOSHA-----	47
BUTTE-----	63	POWHATAN-----	71	MANITOWOC-----	47
JACKSON-----	53	AUGUSTA-----	69	DOOR-----	44
TEXAS		DINWIDDIE-----	68	WINNEBAGO-----	43
CAMERON-----	100	GOOCHLAND-----	68	BARROW-----	41
HIDALGO-----	70	CITY OF VIRGINIA BEACH----	66	WAUKESHA-----	40
MILAM-----	66	SPOTSYLVANIA-----	66		
WICHITA-----	65	CHARLOTTE-----	64	WYOMING	
KENDALL-----	57	FAIRFAX-----	63	LARAMIE-----	65
BURLESON-----	52	FAUQUIER-----	63	PARK-----	58
		BRUNSWICK-----	62	SHERIDAN-----	53
		ORANGE-----	62	ALBANY-----	46
		HENRICO-----	61		
		RICHMOND-----	61		
		ROANOKE-----	57		

1/ ASSOCIATIONS MAY BE COUNTY, MULTI-COUNTY, OR CITY UNITS.

ERRATA

SEVERAL CHANGES SHOULD BE MADE IN YOUR COPY OF THE DHI LETTER, VOL. 49, NO.4, ARS-WE-29.

PAGE 9. LAST PARAGRAPH - THE FIRST SENTENCE SHOULD READ: FROM THAT TIME TO THE PRESENT, SIRE SUMMARIES HAVE BEEN COMPUTED AND PUBLISHED FROM ONE TO FOUR TIMES ANNUALLY.

PAGE 11. LAST LINE UNDER MEMORANDUM OF UNDERSTANDING: ----- PAGE 32.

PAGE 53. IN BLOCK UNDER 1926: BUREAU OF DAIRY INDUSTRY.

PAGE 55. THE DATE 1961 OVER DAIRY CATTLE RESEARCH BRANCH SHOULD BE 1958.

TABLE 11.---EXTENSION DAIRYMEN ADVISING ON THE DAIRY HERD IMPROVEMENT PROGRAM IN EACH STATE AS OF JANUARY 1, 1976

ALABAMA-----CHARLES D. GRIFFIN, DAIRY SCIENCE DEPT., AUBURN UNIVERSITY, AUBURN 36830.

ALASKA-----ARTHUR L. BRUNDAGE, EXPERIMENT STATION RESEARCH STAFF, UNIVERSITY OF ALASKA, PALMER 99645.

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ARKANSAS-----LANTIS RATCLIFF, ANIMAL INDUSTRY & VETERINARY SCIENCE DEPT., UNIVERSITY OF ARKANSAS, LITTLE ROCK 72203.

CALIFORNIA-----FRANK D. MURRILL, EXTENSION SERVICE, UNIVERSITY OF CALIFORNIA, DAVIS 95616.

COLORADO-----DANSON C. JORDAN, ANIMAL SCIENCE DEPT., COLORADO STATE UNIVERSITY, FORT COLLINS 80521.

CONNECTICUT-----ROBERT H. BENSON, ANIMAL INDUSTRIES DEPT., UNIVERSITY OF CONNECTICUT, STORRS 06268.

DELAWARE-----W. R. HESSELTINE, ANIMAL AND POULTRY SCIENCE DEPT., UNIVERSITY OF DELAWARE, NEWARK 19711.

FLORIDA-----DANIEL W. WEBB, DAIRY SCIENCE BLDG., UNIVERSITY OF FLORIDA, GAINESVILLE 32601.

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HAWAII-----STEVEN E. OLBRICH, ANIMAL SCIENCE DEPT., UNIVERSITY OF HAWAII, HONOLULU 96822.

IDAHO-----RICHARD H. ROSS, AGRICULTURAL SCIENCE BLDG., UNIVERSITY OF IDAHO, MOSCOW 83843.

ILLINOIS-----GERHARD W. HARPESTAD, DAIRY SCIENCE DEPT., UNIVERSITY OF ILLINOIS, URBANA 61801.

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IOWA-----DONALD E. VOELKER, ANIMAL & DAIRY SCIENCE DEPT., IOWA STATE UNIVERSITY, AMES 50010.

KANSAS-----E. RALPH BONOWITZ, DAIRY SCIENCE DEPT., KANSAS STATE UNIVERSITY, MANHATTAN 66502.

KENTUCKY-----EVANS E. WRIGHT, DAIRY SCIENCE DEPT., UNIVERSITY OF KENTUCKY, LEXINGTON 40506.

LOUISIANA-----JAMES P. BEATTY, LSU COOP. EXTENSION SERVICE, KNAPP HALL, UNIVERSITY STATION, BATON ROUGE 70803.

MAINE-----CALVIN K. WALKER, ANIMAL SCIENCE DEPT., UNIVERSITY OF MAINE, ORONO 04473.

MARYLAND-----J. LEE MAJESKIE, JULL HALL, DAIRY SCIENCE DEPT., UNIVERSITY OF MARYLAND, COLLEGE PARK 20742.

MASSACHUSETTS-----SIDNEY J. LYFORD, JR., VETERINARY & ANIMAL SCIENCES DEPT., UNIVERSITY OF MASSACHUSETTS, AMHERST 01003.

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MINNESOTA-----J. WILLIAM MUDGE, ANIMAL SCIENCE DEPT., UNIVERSITY OF MINNESOTA, ST. PAUL 55101.

MISSISSIPPI-----GEORGE B. CRAIN, DAIRY SCIENCE DEPT., MISSISSIPPI STATE UNIVERSITY, STATE COLLEGE 39762.

MISSOURI-----REX E. RICKETTS, DAIRY HUSBANDRY DEPT., UNIVERSITY OF MISSOURI, COLUMBIA 65201.

MONTANA-----B. R. MOSS, DEPT. OF ANIMAL SCIENCE & RANGE MANAGEMENT, MONTANA STATE COLLEGE, BOZEMAN 59715.

NEBRASKA-----PHILLIP H. COLE, ANIMAL SCIENCE DEPT., UNIVERSITY OF NEBRASKA, LINCOLN 68503.

NEVADA-----MAX B. RADMALL, ANIMAL SCIENCE DEPT., UNIVERSITY OF NEVADA, RENO 89507.

NEW HAMPSHIRE-----JOHN S. PIOWAR, ANIMAL SCIENCE DEPT., UNIVERSITY OF NEW HAMPSHIRE, DURHAM 03824.

NEW JERSEY-----EDWARD T. OLESKIE, ANIMAL SCIENCE DEPT., RUTGERS UNIVERSITY, NEW BRUNSWICK 08903.

NEW MEXICO-----J. BORDEN ELLS, DAIRY DEPT., NEW MEXICO STATE UNIVERSITY, LAS CRUCES 88001.

NEW YORK-----HARRY R. AINSLIE, ANIMAL SCIENCE DEPT., CORNELL UNIVERSITY, ITHACA 14850.

NORTH CAROLINA-----FRANK D. SARGENT, ANIMAL SCIENCE DEPT., NORTH CAROLINA STATE UNIVERSITY, RALEIGH 27607.

NORTH DAKOTA-----GEORGE R. FISHER, DAIRY HUSBANDRY DEPT., NORTH DAKOTA STATE UNIVERSITY, FARGO 58102.

OHIO-----WALLACE R. TAYLOR, DAIRY SCIENCE DEPT., OHIO STATE UNIVERSITY, COLUMBUS 43210.

OKLAHOMA-----JACK D. STOUT, DEPT. OF DAIRYING, OKLAHOMA STATE UNIVERSITY, STILLWATER 74074.

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PUERTO RICO-----J. L. VALE-SALINAS, AGR. EXTENSION SERVICE, BOX 4R, UNIVERSITY OF PUERTO RICO, RIO PIEDRAS 00928.

RHODE ISLAND-----JAMES W. COBBLE (ACTING), DAIRY SCIENCE DEPT., UNIVERSITY OF RHODE ISLAND, KINGSTON 02881.

SOUTH CAROLINA-----GEORGE E. GRAMLING, DAIRY SCIENCE DEPT., CLEMSON UNIVERSITY, CLEMSON 29631.

SOUTH DAKOTA-----MYERS OWENS, DAIRY SCIENCE DEPT., SOUTH DAKOTA STATE UNIVERSITY, BROOKINGS 57006.

TENNESSEE-----V. D. PARSONS, DAIRY DEPT., UNIVERSITY OF TENNESSEE, P. O. BOX 1071, KNOXVILLE 37901.

TEXAS-----MICHAEL A. TOMASZEWSKI, HERMAN HEEP BLDG. - RM. 110-C, TEXAS A & M UNIVERSITY, COLLEGE STATION 77843.

UTAH-----ROSS OLSEN, DAIRY SCIENCE DEPT., UTAH STATE UNIVERSITY, LOGAN 84321.

VERMONT-----WILLIAM P. LEAMY, ANIMAL & DAIRY SCIENCE DEPT., UNIVERSITY OF VERMONT, BURLINGTON 05401.

VIRGINIA-----WILLIAM N. PATTERSON, DAIRY SCIENCE DEPT., VIRGINIA POLYTECHNIC INSTITUTE, BLACKSBURG 24061.

WASHINGTON-----BILL F. KELSO, WESTERN WASHINGTON RESEARCH AND EXTENSION CENTER, WASH. STATE UNIV., PUYALLUP 98371.

WEST VIRGINIA-----R. O. KELLEY, ANIMAL INDUSTRY & VETERINARY SCIENCE DEPT., WEST VIRGINIA UNIVERSITY, MORGANTOWN 26506.

WISCONSIN-----EUGENE E. STARKEY, DAIRY SCIENCE DEPT., UNIVERSITY OF WISCONSIN, MADISON 53706.

WYOMING-----BARRY J. STEEVENS, BOX 3354, UNIVERSITY STATION, LARAMIE 82071